

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (cancelled).
2. (previously presented): A method according to claim 10, wherein the radiation absorbing organic dye is sandwiched between two workpieces.
3. (previously presented): A method according to claim 10, wherein the radiation absorbing organic dye is provided in at least one of the workpieces.
4. (previously presented): A method according to claim 10, wherein the radiation absorbing organic dye is provided on a substrate by molding the substrate in a mould with an insert formed by or including the radiation absorbing organic dye.
5. (previously presented): A method according to claim 10, wherein the radiation absorbing organic dye is provided as a coating on a substrate.

6. (previously presented): A method according to claim 10, wherein the radiation absorbing organic dye is provided by coextruding the material with a substrate.

7. (previously presented): A method according to claim 10, wherein the radiation absorbing organic dye is exposed to radiation prior to positioning the workpieces together.

8. (previously presented): A method according to claim 10, wherein the radiation absorbing organic dye is exposed to radiation through one of the workpieces.

9. (canceled).

10. (currently amended): A method of forming a weld between plastics workpieces over a joint region, the method comprising:

exposing the joint region to incident radiation having a wavelength outside the visible range so as to cause melting of the surface of one or both workpieces at the joint region, and allowing the melted material to cool thereby welding the workpieces together, the method further comprising providing a radiation absorbing organic dye at the joint region in one of the workpieces or between the workpieces which has an absorption band in the range 780 nm – 1500 nm matched to the wavelength of the incident radiation so as to absorb the incident radiation and generate heat for the melting process, wherein the radiation absorbing organic dye is visually transmissive after welding.

11.-12. (cancelled).

13. (previously presented): A method according to claim 10, wherein the absorption band defines the range 820-860nm.

14. (previously presented): A method according to claim 10, wherein the absorption band lies in the infrared range.

15. (previously presented): A method according to claim 10, wherein the absorption band does not include the range 400-700nm.

16. (previously presented): A method according to claim 10, wherein the radiation is in the infrared range.

17. (previously presented): A method according to claim 10, wherein the wavelength of the incident radiation lies in the range 700-2500nm.

18. (original): A method according to claim 17, wherein the wavelength of the incident radiation lies in the range 790-860nm.

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19. (original): A method according to claim 17, wherein the wavelength of the incident radiation lies in the range 940-980nm.

20. (previously presented): A method according to claim 10, wherein the radiation is a laser beam.

21. (previously presented): A pair of workpieces which have been welded by a method according to claim 10.

22.-25. (cancelled).

26. (previously presented): A method according to claim 10, wherein the workpieces comprise thin films.

27. (previously presented): A method according to claim 10, wherein the workpieces are made of thermoplastic.

28. (cancelled).

29. (previously presented): A method according to claim 10, wherein the workpieces are thermoplastic films.

30. (previously presented): A method according to claim 26, wherein said thin films comprise polyester or fluoropolymer.

31.-61. (cancelled).

62. (previously presented): A method according to claim 10, wherein the absorption band of the radiation absorbing organic dye, which is matched to the wavelength of the incident radiation, is in the range from 780 nm - 1500 nm.

63. (previously presented): A method according to claim 10, wherein the workpieces comprise fabrics.

64. (previously presented): A method according to claim 63, wherein the fabrics are nylon-based fabrics.

65. (previously presented): A method according to claim 63, wherein the fabrics are polyurethane coated.

66. (previously presented): A method according to claim 63, wherein the fabrics comprise polyamidelpolytetrafluoroethylene laminated fabrics.

67. (previously presented): The method according to claim 27, wherein the thermoplastic workpieces are textiles.

68. (previously presented): A method according to claim 70, wherein the weld formed at the joint region is translucent in visible light.

69. (previously presented): A method according to claim 70, wherein the weld formed at the joint region is transparent in visible light.

70. (previously presented): A method according to claim 10, wherein a weld formed at the joint region by exposure to the incident radiation is visually transmissive in visible light.

71. (previously presented): A method according to claim 10, wherein the radiation absorbing organic dye is a cyanine dye.

72. (previously presented): A method according to claim 10, wherein the radiation absorbing organic dye is a squarylium dye.

73. (previously presented): A method according to claim 10, wherein the radiation absorbing organic dye is a croconium dye.

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74. (previously presented): A method according to claim 10, wherein the wavelength of the incident radiation that is exposed to the joint region is in the range of 700-2500 nm, and the absorption band of the radiation absorbing dye, which is matched to the incident radiation, is in the range of 750-1100.

75. (new): A method according to claim 10, wherein the radiation absorbing organic dye is soluble in an organic polymer.